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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENNETH R. OWENS, SRINIVAS V. MAKAM,
CHANGCHENG HUANG, and VISHAL SHARMA

Appeal 2009-001219
Application 09/692,884
Technology Center 2600

Decided: February 26, 2010

Before KENNETH W. HAIRSTON, JOHN A. JEFFERY, and
THOMAS S. HAHN, *Administrative Patent Judges*.

HAHN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants invoke our review under 35 U.S.C. § 134 from the Examiner's final rejections of claims 1-24. We have jurisdiction under 35 U.S.C. § 6(b). We reverse the rejection of claims 17-24, and enter a new ground of rejection for claims 1-16 under 37 C.F.R. § 41.50(b).

STATEMENT OF THE CASE

Appellants claim a method and system for Internet information traffic transmission that use first and second multi-protocol label switches. The second switch establishes a reverse notification path to the first switch. A reverse notification message reporting receipt at the second switch of information traffic flow from a transmission path is sent from the second to the first switch. Interruption of the reverse notification message notifies the first switch to execute protection switching by re-routing information traffic from the failed path.[1] Claim 17 is illustrative:

> 17. A system for establishing a traffic flow over a protection path in a data network, comprising:
>
> a plurality of switches operable to route the traffic flow in the data network,
>
> a first one of the plurality of switches operable to establish a working path and a protection path, a second one of the plurality of switches that is downstream from the first one of the plurality of switches being on the working path,
>
> the second one of the plurality of switches operable to establish a reverse notification path to the first one of the plurality of switches, the second one of the plurality of switches operable to send a reverse notification message upstream to the first one of the plurality of switches in response to receiving the traffic flow from the first one of the plurality of switches over the working path, the reverse notification message operable to provide information related to the working path in order to determine whether the traffic flow is to be re-routed from the working path to the protection path, the interruption of which controls protection switching by said first switch.

[1] *See generally* Spec. 7:10-13; 8:17-21; 10:2-12; 26:5-11; Figs. 1 and 2.

The Examiner relies on the following prior art references to show unpatentability:[2]

Lemieux	US 6,452,942 B1	Sep. 17, 2002
Cao	US 2002/0181485 A1	Dec. 5, 2002
Hwang	US 6,590,893 B1	Jul. 8, 2003
Aukia	US 6,594,268 B1	Jul. 15, 2003
McAllister	US 6,697,329 B1	Feb. 24, 2004

1. The Examiner rejected claims 10, 11, and 13-24 under 35 U.S.C. § 103(a) as unpatentable over Cao and McAllister (Ans. 3-13).
2. The Examiner rejected claims 1, 2, 4, 5, and 7-9 under 35 U.S.C. § 103(a) as unpatentable over Cao, McAllister, and Hwang (Ans. 13-19).
3. The Examiner rejected claim 3 under 35 U.S.C. § 103(a) as unpatentable over Cao, McAllister, Hwang, and Aukia (Ans. 19-20).
4. The Examiner rejected claim 12 under 35 U.S.C. § 103(a) as unpatentable over Cao, McAllister, and Aukia (Ans. 20-21).
5. The Examiner rejected claim 6 under 35 U.S.C. § 103(a) as unpatentable over Cao, McAllister, and Lemieux (Ans. 21-22).

Rather than repeat the arguments of Appellants or of the Examiner, we refer to the Briefs and the Answer[3] for their respective details. In this decision, we have considered only those arguments actually made by Appellants. Arguments that Appellants could have made but did not make

[2] Effective filing dates for these documents precede Appellants' earliest effective filing date and are not at issue.
[3] We refer throughout this opinion to (1) the Appeal Brief filed Aug. 20, 2007, (2) the Examiner's Answer mailed Jan. 2, 2008, and (3) the Reply Brief filed Mar. 3, 2008.

in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

Appellants' Arguments

Appellants group claims 10, 11, and 13-24, and collectively argue the rejection under § 103(a) of the included independent claims 10 and 17 (App. Br. 8-14; Reply Br. 8-17).[4] Appellants, *inter alia*, argue that Cao and McAllister "fail to use the interruption of [a] . . . traffic indication message to control protection switching at the sending switch" (App. Br. 11).

ISSUE

Have Appellants shown that under § 103 the Examiner erred in finding Cao and McAllister, either alone or in combination, teach or suggest having a first multi-protocol label switch, upon interruption of a reverse notification message, re-route information transmissions to a second switch from a failed working path to a protection path as recited in independent claim 17?

FINDINGS OF FACT

The record supports the following Findings of Fact (FF) by a preponderance of the evidence:

1. Cao describes an apparatus and method for Internet protocol flow ring protection switching that uses a plurality of routed label switched paths between source and sink routers (Abstract).

[4] A new ground of rejection under 37 C.F.R. § 41.50(b), addressed *infra*, is entered for independent claim 10 and its dependent claims 11-16.

2. Cao discloses that the reference as drafted uses "the term 'routers' . . . to describe both routers and switches" (¶ [0003]). Further, Cao discloses that "a plurality of paths from a source (entry) router to a sink (destination) router" are established for transferring information (¶ [0006]).
3. Cao's "sink router chooses one of the[] [established] paths as the primary path and communicates along this primary path unless the primary path fails" (¶ [0011]). When "a failure is detected, the router that first detects the failure propagates this information to the source and sink routers . . . [, and] the sink router switches to the secondary path for communications" (¶ [0011]; *see also* (¶ [0006]).
4. McAllister discloses a method for establishing a communications network that includes interconnected source, destination, and intermediate nodes, and also includes a virtual circuit having a path across the network specified by a human operator (Abstract).
5. Messages are sent between pairs of McAllister nodes to inform the nodes that the interconnecting links are alive and functioning (col. 9, ll. 60-64).
6. McAllister discloses that "[w]hen a link failure is detected . . . the functioning part of the network transmit[s] a signal indicative of the failure . . . to the source or ingress node . . . [, and] [u]pon receipt of this signal, the source node may attempt to re-route . . . [to] a different path" (col. 10, ll. 2-8).
7. Independent claim 1 covers both "a multi-protocol label switching system (MPLS) data network comprised of a plurality of data switches . . . , [and] a method of establishing a traffic flow over a protection

path from a source switch to a destination switch through a second set of switches . . ." (App. Br. 20; claim 1, ll. 1-8).

8. Independent claim 10 covers both "a multi-protocol label switching system (MPLS) data network . . . , [and] a method of routing traffic flow from a working path through said network to a protection path through said network . . ." (App. Br. 23; claim 10, ll. 1-7).

PRINCIPLES OF LAW

An Examiner, in rejecting claims under 35 U.S.C. § 103, must establish a factual basis to support a legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). The required factual determinations are set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966) (explaining that 35 U.S.C. § 103 requires determinations of the (1) scope and content of prior art; (2) differences between the prior art and claims at issue; and (3) level of ordinary skill in the art).

ANALYSIS

Obviousness

Claims 17-24

Claims 18-24 directly or indirectly depend from independent claim 17, and all stand rejected under § 103(a) as being unpatentable over Cao and McAllister (Ans. 7-13). After reviewing these references, we find the evidence of record supporting Appellants' position that these references do not teach or suggest the recited interruption of a reverse notification message reporting receipt of information traffic flow at a second switch to have a first switch re-route transmissions from a failed path.

The Examiner and we find Cao teaches an information flow system including a plurality of switches operable to route information flow on different paths (Ans. 7-8; FF 1, 2). The Examiner, however, further finds:

> Cao et al. does not disclose that the second switch is operable to establish a reverse notification path and send a reverse notification message upstream to the first switch in response to receiving the traffic flow from the first switch. Cao et al. also does not disclose a reverse notification message operable to provide information related to the working path in order to determine whether the traffic flow is to be re-routed from the working path to the protection path, the interruption of which controls protection switching.

(Ans. 8). To address these Cao deficiencies, the Examiner turns to McAllister, and finds this subject matter taught by McAllister (Ans. 8-9). We do not find the Examiner's position supported by evidence of record.

The Examiner and we find McAllister teaches establishing a communications network that includes nodes, i.e., switches, interconnected by links, i.e., paths, for transmitting information traffic (Ans. 8; FF 4). According to the Examiner:

> [McAllister] discloses sending a message establishing a reverse notification path through the network between the first and second switches in response to data received from the first switch (See column 9 [,] line 47 to column 10 [,] line 8 of McAllister et al. for reference to using a path from a second node to a first node to sending messages and acknowledgements to the message from the second node to the first node in response to protocol messages, the second message, sent from the first node).

(Ans. 8.) We concur that McAllister discloses sending messages to inform nodes that interconnecting links, i.e., paths, are alive and functioning (FF 5). However, the Examiner then finds:

> McAllister et al. also discloses sending a third message over the reverse notification path the interruption of which is used to determine whether the traffic flow is to be re-routed from the working path to the protection path (See column 9 [,] line 47 to column 10 [,] line 8 of McAllister et al. for reference to the messaging being in an acknowledgement format, meaning that a third acknowledgement message is sent from the second node in response to receiving a message, which is in a traffic flow from the first node over a working virtual connection).

(Ans. 8-9.) We fail to find McAllister teaches or suggests monitoring for interruption of performance messages and implementing any action on identifying an interruption. Instead, we find McAllister explicitly discloses that "'[w]hen a link failure is detected . . . the functioning part of the network transmit[s] a signal indicative of the failure . . . to the source or ingress node . . . [, and] [u]pon receipt of this signal, the source node may attempt to re-route . . . [to] a different path'" (FF 6). We are persuaded that the record supports Appellants' assertion that both Cao and McAllister "fail to use the interruption of [a] . . . traffic indication message to control protection switching at the sending switch" (Reply Br. 13). Consequently, we find these references, either alone or in combination, are deficient as to claim subject matter.

For the foregoing reasons, we agree with Appellants' arguments that the Examiner erred in finding that Cao and McAllister teach or suggest subject matter covered by claim 17. Therefore, the rejection of claim 17

cannot be sustained, nor can the rejection be sustained for the grouped claims 18-24 that depend from claim 17.

Claims 1-16

For reasons expressed *infra*, independent claims 1 and 10, and their dependent claims 2-9 and 11-16 are indefinite. Therefore, we need not reach the prior art rejections under § 103(a) "because the claims do not particularly point out and distinctly claim the invention as required by 35 U.S.C. § 112," and because the prior art references can not be applied to the claims without making speculative assumptions. *See In re Steele*, 305 F.2d 859, 862-63 (CCPA 1962). Our decision in this regard is based solely on the indefiniteness of the claimed subject matter and does not reflect on the adequacy of the prior art evidence applied in support of the rejections.

New Ground of Rejection under 37 C.F.R. § 41.50(b)

Under 37 C.F.R. § 41.50(b), we enter a new ground of rejection for claims 1-16. Claims 1-16 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite.

35 U.S.C. § 112, Second Paragraph

Claims 1-16

The test for definiteness under 35 U.S.C. § 112, second paragraph, "requires a determination whether those skilled in the art would understand what is claimed." *Amgen, Inc. v. Chugai Pharmaceutical Co. Ltd.,* 927 F.2d 1200, 1217 (Fed. Cir. 1991) (citation omitted).

Independent claims 1 and 10 are drafted to cover both a switched data network and also a method for using the network (FF 7 and 8). As such, these independent claims and their dependent claims that incorporate by reference all limitations of their direct and indirect base claims are indefinite. These claims are indefinite because "[a] single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. § 112, second paragraph. *IPXL Holdings*[, *L.L.C.*] *v. Amazon.com, Inc.* 430 F[3]d 1377, 1384 . . . (Fed. Cir. 2005); *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990) (claim directed to an automatic transmission workstand and the method of using it held ambiguous and properly rejected under 35 U.S.C. 112, second paragraph)." MPEP § 2173.05(p)(II).

Thus, claims 1-16 are rejected under 35 U.S.C. § 112, second paragraph.

CONCLUSION

Appellants have shown the Examiner erred in finding under §103(a) that Cao and McAllister teach or suggest having a first multi-protocol label switch, upon interruption of a reverse notification message, re-route information transmissions to a second switch from a failed working path to a protection path as recited in independent claim 17.

ORDER

We reverse the Examiner's rejection of claims 17-24.

We have entered a new ground of rejection under 37 C.F.R. § 41.50(b) for claims 1-16 under 35 U.S.C. § 112, second paragraph.

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides that "[a] new ground of rejection.., shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that the Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

> (1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner. . . .
>
> (2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

REVERSED - 37 C.F.R. § 41.50(b)

KIS

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